## Amendments to the Claims

## 1. (Currently Amended)

A compound having the Formula I:

By

or a pharmaceutically acceptable salt[[, prodrug]] or solvate thereof, wherein:

$$Y$$
 is  $R_6$  or  $R_{7}$ .

provided that when Y is  $R_7$ ,  $R_1$  is aminocarbonyl — $C(O)NH_2$ ;

A<sub>1</sub> is N and A<sub>2</sub> and A<sub>3</sub> are CR<sub>2</sub>, or A<sub>3</sub> is N and A<sub>1</sub> and A<sub>2</sub> are CR<sub>2</sub>;

 $R_1$  is selected from the group consisting an optionally substituted alkyl, amino, alkylthio,  $C(O)R_8$ ,  $SO_2R_8$ ,  $OC(O)NH_2$ , 2-imidazolinyl, 2-imidazolyl, 3-pyrazolyl, 5-isoxazolyl, and 3-(1,2,4)-triazolyl;

each  $R_2$  is selected from the group consisting of hydrogen, optionally substituted alkyl, alkenyl, or alkynyl, halogen, hydroxy, cycloalkyl, cyano, amino, alkylamino, dialkylamino, alkoxy, aminocarbonyl, alkylaminocarbonyl, arylaminocarbonyl, aralkylaminocarbonyl, alkylamino, arylcarbonylamino, and aralkylcarbonylamino; or  $R_1$  and  $R_2$  are taken together with the carbon atoms to which they are attached to form a heterocyclic ring;

R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, and R<sub>6</sub> are independently selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, halogen, haloalkyl, hydroxyalkyl, hydroxy, nitro, amino, cyano, amide, carboxyalkyl, alkoxyalkyl, ureido, acylamino, thiol, acyloxy, azido, alkoxy, carboxy, earbonylamido and alkylthiol;

R<sub>7</sub> is an optionally substituted alkyl;

R<sub>8</sub> is selected from the group consisting of alkyl, alkenyl, alkynyl, OR<sub>9</sub>, amino, alkylamino, dialkylamino, dialkylamino, dialkylaminoalkenylamino, dialkylaminoalkenylamino, hydroxyaminoalkenylamino,



cycloalkyl, heterocycloalkyl, cycloalkylalkylamino, heterocycloalkylamino, aryl, arylalkyl, arylalkynyl, and arylalkylamino, all of which can be optionally substituted, provided that  $R_8$  is not  $OR_9$  when  $R_1$  is  $SO_2R_8$ ; wherein

R<sub>9</sub> is selected from the group consisting of hydrogen, optionally substituted alkyl, and an alkali metal; and

X is one of O, S, NH, or CH<sub>2</sub> when Y is other than R<sub>7</sub>; or

X is one of O, S, NH, CH<sub>2</sub> or absent when Y is R<sub>7</sub>;

with the provisos that  $R_2$  is not methoxy if  $R_5$  is trifluoromethyl,  $R_6$  is H, X is O and  $R_1$  is  $SO_2CH_2Ph$ ; or each  $R_2$  is hydrogen when  $R_1$  is carboxy, X is O,  $A_1$  is N, and Y

## 2. (Currently Amended) A compound having the Formula II:

or a pharmaceutically acceptable salt[[, prodrug]] or solvate thereof, wherein:

 $A_1$  is N and  $A_2$  and  $A_3$  are  $CR_2$ , or  $A_3$  is N and  $A_1$  and  $A_2$  are  $CR_2$ ;

 $R_1$  is selected from the group consisting an optionally substituted alkyl, amino, alkylthio,  $C(O)R_8$ ,  $SO_2R_8$ ,  $OC(O)NH_2$ , 2-imidazolinyl, 2-imidazolyl, 3-pyrazolyl, 5-isoxazolyl, and 3-(1,2,4)-triazolyl;

each  $R_2$  is selected from the group consisting of hydrogen, optionally substituted alkyl, alkenyl, or alkynyl, halogen, hydroxy, cycloalkyl, cyano, amino, alkylamino, dialkylamino, alkoxy, aminocarbonyl, alkylaminocarbonyl, arylaminocarbonyl, aralkylaminocarbonyl, alkylcarbonylamino, arylcarbonylamino, and aralkylcarbonylamino; or  $R_1$  and  $R_2$  are taken together with the carbon atoms to which they are attached to form a heterocyclic ring;



R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, and R<sub>6</sub> are independently selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, halogen, haloalkyl, hydroxyalkyl, hydroxy, nitro, amino, cyano, amide, carboxyalkyl, alkoxyalkyl, ureido, acylamino, thiol, acyloxy, azido, alkoxy, carboxy, earbonylamido and alkylthiol; and

R<sub>8</sub> is selected from the group consisting of alkyl, alkenyl, alkynyl, OR<sub>9</sub>, amino, alkylamino, dialkylamino, dialkylamino, dialkylaminoalkenylamino, dialkylaminoalkenylamino, hydroxyaminoalkenylamino, cycloalkyl, heterocycloalkyl, cycloalkylalkylamino, heterocycloalkylamino, aryl, arylalkyl, arylalkenyl, arylalkynyl, and arylalkylamino, all of which can be optionally substituted, provided that R<sub>8</sub> is not OR<sub>9</sub> when R<sub>1</sub> is SO<sub>2</sub>R<sub>8</sub>; wherein

R<sub>9</sub> is selected from the group consisting of hydrogen, optionally substituted alkyl, and an alkali metal; and

X is one of O, S, NH, or CH<sub>2</sub>;

with the provisos that  $R_2$  is not methoxy if  $R_5$  is trifluoromethyl,  $R_6$  is H, X is O and  $R_1$  is  $SO_2CH_2Ph$ ; or each  $R_2$  is hydrogen when  $R_1$  is carboxy, X is O, and  $A_1$  is N.

- 3. (Previously Presented) The compound of claim 2, wherein  $A_3$  is N and  $A_1$  and  $A_2$  are  $CR_2$ .
- 4. (Original) The compound of claim 2, wherein  $R_1$  is selected from the group consisting of an alkyl optionally substituted by halogen or hydroxy,  $C(O)R_8$ ,  $SO_2R_8$ , 2-imidazolyl, 2-imidazolyl, 3-pyrazolyl, and 5-isoxazolyl, wherein  $R_8$  is as defined in claim 2, provided that  $R_8$  is not  $OR_9$  when  $R_1$  is  $SO_2R_8$ .
- 5. (Original) The compound of claim 4, wherein R<sub>8</sub> is selected from the group consisting of alkyl, alkenyl, OR<sub>9</sub>, amino, alkylamino, dialkylamino, alkenylamino, dialkylaminoalkylaminoalkylamino, and heterocycloalkylamino, all of which can be optionally substituted, and wherein R<sub>9</sub> is as defined in claim 2.
- 6. (Original) The compound of claim 2, wherein R<sub>2</sub> is selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, aminoalkyl, amino, hydroxyalkyl, alkoxy, aminocarbonyl, alkylaminocarbonyl, arylaminocarbonyl, aralkylaminocarbonyl, alkylcarbonylamino, arylcarbonylamino, and aralkylcarbonylamino.





7. (Original) The compound of claim 6, wherein R<sub>2</sub> is selected from the group consisting of hydrogen, alkyl, alkoxy, aminoalkyl and aminocarbonyl.

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- 8. (Original) The compound of claim 2, wherein R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, and R<sub>6</sub> are independently selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, halogen, haloalkyl, hydroxyalkyl, hydroxy, nitro, amino, and cyano.
- 9. (Original) The compound of claim 8, wherein  $R_3$  and  $R_4$  are both hydrogen and  $R_5$  and  $R_6$  are independently selected from the group consisting of hydrogen, alkyl, halogen, haloalkyl, and nitro.
  - 10. (Original) The compound of claim 2, wherein X is O or S.
  - 11. (Original) The compound of claim 10, wherein X is O.
- 12. (Original) The compound of claim 2, wherein  $R_2$  is hydrogen, X is O or S and  $R_1$  is aminocarbonyl.

13. (Canceled)

13. (Original) The compound of claim 2, wherein  $A_1$  is N,  $A_2$  is  $CR_2$ , wherein  $R_2$  is other than H and  $A_3$  is CH.

15. (Original) The compound of claim 2, wherein  $A_3$  is N,  $A_2$  is  $CR_2$ , wherein  $R_2$  is other than H and  $A_1$  is CH.

16. (Canceled)

1/2. (Currently Amended) The compound of claim 2, having the Formula III:



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or a pharmaceutically acceptable salt[[, prodrug]] or solvate thereof, wherein;  $A_1$ - $A_3$ ,  $R_2$ - $R_6$ ,  $R_8$  and X are as defined in claim 2.

- 16. (Previously Presented) The compound of claim  $\mathcal{N}$ , wherein  $A_3$  is N and  $A_1$  and  $A_2$  are  $CR_2$ .
- 19. (Original) The compound of claim 17, wherein R<sub>2</sub> is selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, aminoalkyl, amino, hydroxyalkyl, alkoxy, aminocarbonyl, alkylaminocarbonyl, arylaminocarbonyl, aralkylaminocarbonyl, alkylcarbonylamino, arylcarbonylamino, and aralkylcarbonylamino.
- 20. (Original) The compound of claim 19, wherein R<sub>2</sub> is selected from the group consisting of hydrogen, alkyl, alkoxy, aminoalkyl and aminocarbonyl.
- 21. (Original) The compound of claim 11, wherein R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, and R<sub>6</sub> are independently selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, halogen, haloalkyl, hydroxyalkyl, hydroxy, nitro, amino, and cyano.
- 2/2. (Original) The compound of claim 2/1, wherein  $R_3$  and  $R_4$  are both hydrogen and  $R_5$  and  $R_6$  are independently selected from the group consisting of hydrogen, alkyl, halogen, haloalkyl, and nitro.
- 23. (Previously Presented) The compound of claim 17, wherein  $R_8$  is selected from the group consisting of alkyl, alkenyl,  $OR_9$ , amino, alkylamino, dialkylamino, alkenylamino, dialkylaminoalkenyl, dialkylaminoalkylamino, and heterocycloalkylamino, all of which can be optionally substituted, provided that  $R_8$  is not  $OR_9$  when  $R_1$  is  $SO_2R_8$ .



24. (Original) The compound of claim 17, wherein X is O or S.

25. (Original) The compound of claim 24, wherein X is O.

26. (Previously Presented) The compound of claim 17, wherein

X is O;

A<sub>1</sub> is N and A<sub>2</sub> and A<sub>3</sub> are CR<sub>2</sub>; or A<sub>3</sub> is N and A<sub>1</sub> and A<sub>2</sub> are CR<sub>2</sub>; wherein

R<sub>2</sub> is selected from the group consisting of hydrogen, alkyl, alkoxy, aminoalkyl, and aminocarbonyl;

R<sub>3</sub> and R<sub>4</sub> are both hydrogen;

R<sub>5</sub> and R<sub>6</sub> are independently selected from the group consisting of hydrogen, alkyl, halogen, haloalkyl, and nitro; and

R<sub>8</sub> is amino.

27. (Canceled)

28. (Original) The compound of claim 1/2, wherein  $A_1$  is N,  $A_2$  is  $CR_2$ , wherein  $R_2$  is other than H and  $A_3$  is CH.

29. (Original) The compound of claim 17, wherein A<sub>3</sub> is N, A<sub>2</sub> is CR<sub>2</sub>, wherein  $R_2$  is other than H and  $A_1$  is CH.

30. (Canceled)

31. (Currently Amended)

The compound of claim 2, having Formula IV:

$$R_5$$
 $R_6$ 
 $R_6$ 
 $R_4$ 
 $R_5$ 
 $R_6$ 
 $R_6$ 
 $R_6$ 

or a pharmaceutically acceptable salt[[, prodrug]] or solvate thereof; wherein:

A<sub>1</sub>-A<sub>3</sub>, R<sub>2</sub>-R<sub>6</sub>, and X are as defined in claim 2 and

R<sub>8</sub> is selected from the group consisting of alkyl, alkenyl, alkynyl, amino, alkylamino, dialkylamino, dialkylamino, dialkylamino, dialkylaminoalkylamino, cycloalkyl, heterocycloalkyl, cycloalkylalkylamino, heterocycloalkylamino, aryl, arylalkyl, arylalkynyl, and arylalkylamino, all of which can be optionally substituted.

32. (Previously Presented) The compound of claim 31, wherein R<sub>2</sub> is selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, aminoalkyl, amino, hydroxyalkyl, alkoxy, aminocarbonyl, alkylaminocarbonyl, arylaminocarbonyl, aralkylaminocarbonyl, alkylcarbonylamino, and aralkylcarbonylamino.

 $\sqrt{\phantom{a}}$  33. (Original) The compound of claim 32, wherein  $R_2$  is selected from the group consisting of hydrogen, alkyl, alkoxy, aminoalkyl and aminocarbonyl.

34. (Original) The compound of claim 31, wherein  $R_3$ ,  $R_4$ ,  $R_5$ , and  $R_6$  are independently selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, halogen, haloalkyl, hydroxyalkyl, hydroxy, nitro, amino, and cyano.

35. (Original) The compound of claim 34, wherein  $R_3$  and  $R_4$  are both hydrogen and  $R_5$  and  $R_6$  are independently selected from the group consisting of hydrogen, alkyl, halogen, haloalkyl, and nitro.

36. (Original) The compound of claim 31, wherein  $R_8$  is selected from the group consisting of alkyl, alkenyl, amino, alkylamino, dialkylamino, alkenylamino, dialkylaminoalkenyl, and heterocycloalkylamino, all of which can be optionally substituted.

37. (Original) The compound of claim 31, wherein X is O or S.

38. (Original) The compound of claim 37, wherein X is O.

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- 39. (Currently Amended) A compound of claim 2, wherein said compound is:
- 4-[4-(4-fluorophenoxy)phenyl]pyrimidine-2-carboxamide;
- 4-[4-(4-nitrophenoxy)phenyl]pyrimidine-2-carboxamide;
- 4-[4-(4-methoxyphenoxy)phenyl]pyrimidine-2-carboxamide;
- 4-[4-(4-trifluoromethylphenoxy)phenyl]pyrimidine-2-carboxamide;
- 4-[4-(3-chloro-2-cyanophenoxy)phenyl]pyrimidine-2-carboxamide;
- 4-[4-(4-chloro-2-fluorophenoxy)phenyl]pyrimidine-2-carboxamide;
- 4-[4-(2,4-difluorophenoxy)phenyl]pyrimidine-2-carboxamide;
- 4-[4-(2-chloro-4-fluorophenoxy)phenyl]pyrimidine-2-carboxamide;
- 1-[4-[4-(4-fluorophenoxy)phenyl]pyrimidine-2-yl]-ethanone;
- 2-[4-(4-fluorophenoxy)phenyl]pyrimidine-4-carboxamide;
- 2-[4-(4-fluorophenoxy)phenyl]-4-methylpyrimidine;
- 2-methyl-4-[4-(4-fluorophenoxy)phenyl]pyrimidine;
- 4-[4-(4-fluorophenoxy)phenyl]pyrimidine-2-carboxylic acid;
- 4-[4-(4-fluorophenoxy)phenyl]pyrimidine-2-carboxylic acid sodium salt;
- 4-[4-(4-fluorophenoxy)phenyl]pyrimidine-2-carboxylic acid methylamide;
- 4-[4-(4-fluorophenoxy)phenyl]pyrimidine-2-carboxylic acid dimethylamide;
- 4-[4-(4-fluorophenoxy)phenyl]pyrimidine-2-carboxylic acid tert-butylamide;
- 2-[4-(4-chloro-2-fluorophenoxy)phenyl]pyrimidine-4-carboxamide;
- 2-[4-(4-chloro-2-fluorophenoxy)phenyl]pyrimidine-4-carboxylic acid:
- 2-(4-phenoxyphenyl)-6-(dimethylamino)pyrimidine-4-carboxylic acid dimethylamide;
- 4-[4-(4-fluorophenoxy)phenyl]pyrimidine-2-carboxylic acid 2-hydroxyethylamide;
- 4-[4-(4-fluorophenoxy)phenyl]pyrimidine-2-carboxylic acid hydroxymethyleneamide;
  - 2-(2-hydroxyprop-2-yl)-4-[4-(4-fluorophenoxy)phenyl]pyrimidine;
- 4-[4-(2,4-difluorophenoxy)phenyl]pyrimidine-2-carboxylic acid 2-morpholin-4-yl-ethyl amide;
  - 2-(4,5-dihydro-1H-imidazol-2-yl)-4-[4-(4-fluorophenoxy)phenyl]-pyrimidine;
  - 2-(3-pyrazolyl)-4-[4-(4-fluorophenoxy)phenyl]pyrimidine;
  - 2-(5-isoxazolyl)-4-[4-(4-fluorophenoxy)phenyl]pyrimidine;
  - 2-(1-methyl-3-pyrazolyl)-4-[4-(4-fluorophenoxy)phenyl]pyrimidine;



2-[4-(4-chloro-2-fluorophenoxy)phenyl]pyrimidine-4-carboxylic acid methylamide;

3-dimethylamino-1-{4-[4-(4-fluorophenoxy)phenyl}pyrimidin-2-yl]propenone;

2-thiomethyl-4-[4-(4-fluorophenoxy)phenyl]pyrimidine;

2-methanesulfonyl-4-[4-(4-fluorophenoxy)phenyl]pyrimidine;

2-[4-(4-chloro-2-fluorophenoxy)phenyl]-4-methyl-pyrimidine;

4-[4-(4-fluorophenoxy)-3-fluorophenyl]pyrimidine-2-carboxamide; or

2-[4-(4-fluorophenoxy)-3-fluorophenyl]pyrimidine-4-carboxamide;

or a pharmaceutically acceptable salt, prodrug or solvate thereof.

41. (Currently Amended) The compound of claim 1, having the Formula V:

or a pharmaceutically acceptable salt[[, prodrug]] or solvate thereof, wherein;

A<sub>1</sub>-A<sub>3</sub>, R<sub>2</sub>-R<sub>4</sub>, and R<sub>7</sub> are as defined in claim 1; and

X is one of O, S, NH, CH<sub>2</sub> or absent.

 $\frac{2}{3}$  (Previously Presented) The compound of claim 41, wherein A<sub>3</sub> is N and A<sub>1</sub> and A<sub>2</sub> are CR<sub>2</sub>.

 $3^{\circ}$  43. (Original) The compound of claim 41, wherein  $R_7$  is a  $C_{1-6}$  alkyl optionally substituted with one or more of halogen, hydroxy, nitro, amino, cyano and alkoxy.

44. (Original) The compound of claim 41, wherein R<sub>2</sub> is selected from the group consisting of hydrogen, alkyl, alkoxy, aminoalkyl and aminocarbonyl.





45. (Original) The compound of claim 41, wherein R<sub>3</sub> and R<sub>4</sub> are independently selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, halogen, haloalkyl, hydroxyalkyl, hydroxy, nitro, amino, and cyano.

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46. (Original) The compound of claim 45, wherein R<sub>3</sub> and R<sub>4</sub> are both hydrogen.

47. (Original) The compound of claim 41, wherein X is O or S.

\(\frac{\frac{1}{3}}{3}\)
48. (Original) The compound of claim 47, wherein X is O.

49. (Canceled)

50. (Currently Amended) A pharmaceutical composition, comprising the compound of formula:

$$\frac{R_3}{R_4}$$

or a pharmaceutically acceptable salt[[, prodrug]] or solvate thereof, wherein:

Y is  $R_6$  or  $R_7$ , provided that when Y is  $R_7$ ,  $R_1$  is

aminocarbonyl —C(O)NH<sub>2</sub>;

 $A_1$  is N and  $A_2$  and  $A_3$  are  $CR_2$ ; or  $A_3$  is N and  $A_1$  and  $A_2$  are  $CR_2$ ;

 $R_1$  is selected from the group consisting an optionally substituted alkyl, amino, alkylthio,  $C(O)R_8$ ,  $SO_2R_8$ ,  $OC(O)NH_2$ , 2-imidazolinyl, 2-imidazolyl, 3-pyrazolyl, 5-isoxazolyl, and 3-(1,2,4)-triazolyl;

each R<sub>2</sub> is selected from the group consisting of hydrogen, optionally substituted alkyl, alkenyl, or alkynyl, halogen, hydroxy, cycloalkyl, cyano, amino, alkylamino,



dialkylamino, alkoxy, aminocarbonyl, alkylaminocarbonyl, arylaminocarbonyl, aralkylaminocarbonyl, alkylcarbonylamino, arylcarbonylamino, and aralkylcarbonylamino; or  $R_1$  and  $R_2$  are taken together with the carbon atoms to which they are attached to form a heterocyclic ring;

R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, and R<sub>6</sub> are independently selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, halogen, haloalkyl, hydroxyalkyl, hydroxy, nitro, amino, cyano, amide, carboxyalkyl, alkoxyalkyl, ureido, acylamino, thiol, acyloxy, azido, alkoxy, carboxy, earbonylamido and alkylthiol;

R<sub>7</sub> is an optionally substituted alkyl;

R<sub>8</sub> is selected from the group consisting of alkyl, alkenyl, alkynyl, OR<sub>9</sub>, amino, alkylamino, dialkylamino, dialkylamino, dialkylaminoalkenylamino, dialkylaminoalkenylamino, hydroxyaminoalkenylamino, cycloalkyl, heterocycloalkyl, cycloalkylalkylamino, heterocycloalkylamino, aryl, arylalkyl, arylalkenyl, arylalkynyl, and arylalkylamino, all of which can be optionally substituted, provided that R<sub>8</sub> is not OR<sub>9</sub> when R<sub>1</sub> is SO<sub>2</sub>R<sub>8</sub>; wherein

R<sub>9</sub> is selected from the group consisting of hydrogen, optionally substituted alkyl, and an alkali metal; and

X is one of O, S, NH, or CH<sub>2</sub> when Y is other than R<sub>7</sub>; or

X is one of O, S, NH, CH<sub>2</sub> or absent when Y is R<sub>7</sub>;

with the proviso that each R<sub>2</sub> is hydrogen when R<sub>1</sub> is carboxy, X is O, A<sub>1</sub> is N,

and Y is  $R_6$ ;

and a pharmaceutically acceptable carrier or diluent.

51. (Currently Amended) The composition of claim 50, wherein the compound is as claimed in any one of claims 1, 2, 63, [[or]] 69, 70, or 71.

52-58. (Canceled)

59. (Currently Amended) A compound of claim-2, wherein said compound is 2-[4-(4-chloro-2-fluorophenoxy)phenyl]pyrimidine-4-carboxamide or a pharmaceutically

acceptable salt, prodrug or solvate thereof.

60. (Currently Amended) [[A]] The compound of claim 59, which is 2-[4-(4-chloro-2-fluorophenoxy)phenyl]pyrimidine-4-carboxamide.

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61. (Previously Presented) A pharmaceutical composition, comprising the compound of claim 59 or claim 60 and a pharmaceutically acceptable carrier or diluent.

63. (Currently Amended) A compound having the Formula I:

or a pharmaceutically acceptable salt[[, prodrug]] or solvate thereof, wherein:

provided that when Y is  $R_7$ ,  $R_1$  is aminocarbonyl — $C(O)NH_2$ ;

A<sub>1</sub> is N and A<sub>2</sub> and A<sub>3</sub> are CR<sub>2</sub>; or A<sub>3</sub> is N and A<sub>1</sub> and A<sub>2</sub> are CR<sub>2</sub>;

 $R_1$  is selected from the group consisting an optionally substituted alkyl, amino, alkylthio,  $C(O)R_8$ ,  $SO_2R_8$ ,  $OC(O)NH_2$ , 2-imidazolinyl, 2-imidazolyl, 3-pyrazolyl, 5-isoxazolyl, and 3-(1,2,4)-triazolyl;

each R<sub>2</sub> is selected from the group consisting of hydrogen, optionally substituted alkyl, alkenyl, or alkynyl, halogen, hydroxy, cycloalkyl, cyano, alkylamino, dialkylamino, alkoxy, aminocarbonyl, alkylaminocarbonyl, arylaminocarbonyl, aralkylaminocarbonyl, and aralkylcarbonylamino; or R<sub>1</sub> and R<sub>2</sub> are taken together with the carbon atoms to which they are attached to form a heterocyclic ring;

R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, and R<sub>6</sub> are independently selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, halogen, haloalkyl, hydroxyalkyl, hydroxy, nitro,



amino, cyano, amide, carboxyalkyl, alkoxyalkyl, ureido, acylamino, thiol, acyloxy, azido, alkoxy, carboxy, earbonylamido and alkylthiol;

R<sub>7</sub> is an optionally substituted alkyl;

R<sub>8</sub> is selected from the group consisting of alkyl, alkenyl, alkynyl, OR<sub>9</sub>, amino, alkylamino, dialkylamino, dialkylamino, dialkylaminoalkenylamino, dialkylaminoalkenylamino, hydroxyaminoalkenylamino, cycloalkyl, heterocycloalkyl, cycloalkylalkylamino, heterocycloalkylamino, aryl, arylalkyl, arylalkenyl, arylalkynyl, and arylalkylamino, all of which can be optionally substituted, provided that R<sub>8</sub> is not OR<sub>9</sub> when R<sub>1</sub> is SO<sub>2</sub>R<sub>8</sub>; wherein

R<sub>9</sub> is selected from the group consisting of hydrogen, optionally substituted alkyl, and an alkali metal; and

X is one of O, S, NH, or CH<sub>2</sub> when Y is other than R<sub>7</sub>; or

X is one of O, S, NH, CH<sub>2</sub> or absent when Y is R<sub>7</sub>;

with the proviso that  $R_2$  is not methoxy if  $R_5$  is trifluoromethyl,  $R_6$  is H, X is O and  $R_1$  is  $SO_2CH_2Ph$ .

64. (Previously Presented) The compound of claim 2, wherein  $A_1$  is N and  $A_2$  and  $A_3$  are  $CR_2$ .

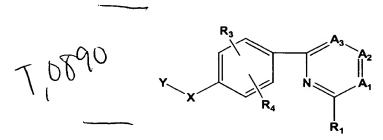
S (Previously Presented) The compound of claim M, wherein  $A_1$  is N and  $A_2$  and  $A_3$  are  $CR_2$ .

66. (Previously Presented) The compound of claim 41, wherein  $A_1$  is N and  $A_2$  and  $A_3$  are  $CR_2$ .

67. (Canceled)



68. (Currently Amended) A pharmaceutical composition, comprising the compound of formula:



or a pharmaceutically acceptable salt[[, prodrug]] or solvate thereof, wherein:

Y is 
$$R_6$$
 or  $R_7$ , provided that when Y is  $R_7$ ,  $R_1$  is aminocarbonyl— $C(O)NH_2$ ;

A<sub>1</sub> is N and A<sub>2</sub> and A<sub>3</sub> are CR<sub>2</sub>; or A<sub>3</sub> is N and A<sub>1</sub> and A<sub>2</sub> are CR<sub>2</sub>;

 $R_1$  is selected from the group consisting an optionally substituted alkyl, amino, alkylthio,  $C(O)R_8$ ,  $SO_2R_8$ ,  $OC(O)NH_2$ , 2-imidazolinyl, 2-imidazolyl, 3-pyrazolyl, 5-isoxazolyl, and 3-(1,2,4)-triazolyl;

each  $R_2$  is selected from the group consisting of hydrogen, optionally substituted alkyl, alkenyl, or alkynyl, halogen, hydroxy, cycloalkyl, cyano, alkylamino, dialkylamino, alkoxy, aminocarbonyl, alkylaminocarbonyl, arylaminocarbonyl, aralkylaminocarbonyl, and aralkylcarbonylamino; or  $R_1$  and  $R_2$  are taken together with the carbon atoms to which they are attached to form a heterocyclic ring;

R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, and R<sub>6</sub> are independently selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, halogen, haloalkyl, hydroxyalkyl, hydroxy, nitro, amino, cyano, amide, carboxyalkyl, alkoxyalkyl, ureido, acylamino, thiol, acyloxy, azido, alkoxy, carboxy, earbonylamido and alkylthiol;

R<sub>7</sub> is an optionally substituted alkyl;

R<sub>8</sub> is selected from the group consisting of alkyl, alkenyl, alkynyl, OR<sub>9</sub>, amino, alkylamino, dialkylamino, dialkylamino, dialkylaminoalkenylamino, dialkylaminoalkenylamino, hydroxyaminoalkenylamino,



cycloalkyl, heterocycloalkyl, cycloalkylalkylamino, heterocycloalkylamino, aryl, arylalkyl, arylalkynyl, and arylalkylamino, all of which can be optionally substituted, provided that  $R_8$  is not  $OR_9$  when  $R_1$  is  $SO_2R_8$ ; wherein

R<sub>9</sub> is selected from the group consisting of hydrogen, optionally substituted alkyl, and an alkali metal; and

X is one of O, S, NH, or CH<sub>2</sub> when Y is other than R<sub>7</sub>; or

X is one of O, S, NH,  $CH_2$  or absent when Y is  $R_7$ ; and a pharmaceutically acceptable carrier or diluent.

رم (Currently Amended) A compound having the Formula I:

or a pharmaceutically acceptable salt[[, prodrug]] or solvate thereof, wherein:

provided that when Y is  $R_7$ ,  $R_1$  is aminocarbonyl — $C(O)NH_2$ ;

 $A_1$  is N and  $A_2$  and  $A_3$  are  $CR_2$ , or  $A_3$  is N and  $A_1$  and  $A_2$  are  $CR_2$ ;

 $R_1$  is selected from the group consisting an optionally substituted alkyl, amino, alkylthio,  $C(O)R_8$ ,  $SO_2R_8$ ,  $OC(O)NH_2$ , 2-imidazolinyl, 2-imidazolyl, 3-pyrazolyl, 5-isoxazolyl, and 3-(1,2,4)-triazolyl;

each  $R_2$  is selected from the group consisting of hydrogen, optionally substituted alkyl, alkenyl, or alkynyl, halogen, hydroxy, cycloalkyl, cyano, amino, alkylamino, dialkylamino, alkoxy, aminocarbonyl, alkylaminocarbonyl, arylaminocarbonyl, aralkylaminocarbonyl, alkylcarbonylamino, arylcarbonylamino, and aralkylcarbonylamino; or  $R_1$  and  $R_2$  are taken together with the carbon atoms to which they are attached to form a heterocyclic ring;

R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, and R<sub>6</sub> are independently selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, halogen, haloalkyl, hydroxyalkyl, hydroxy, nitro,



amino, cyano, amide, carboxyalkyl, alkoxyalkyl, ureido, acylamino, thiol, acyloxy, azido, alkoxy, carboxy, <del>carbonylamido</del> and alkylthiol;

R<sub>7</sub> is an optionally substituted alkyl;

R<sub>8</sub> is selected from the group consisting of alkyl, alkenyl, alkynyl, OR<sub>9</sub>, amino, alkylamino, dialkylamino, dialkylamino, dialkylaminoalkenylamino, dialkylaminoalkenylamino, hydroxyaminoalkenylamino, cycloalkyl, heterocycloalkyl, cycloalkylalkylamino, heterocycloalkylamino, aryl, arylalkyl, arylalkenyl, arylalkynyl, and arylalkylamino, all of which can be optionally substituted, provided that R<sub>8</sub> is not OR<sub>9</sub> when R<sub>1</sub> is SO<sub>2</sub>R<sub>8</sub>; wherein

R<sub>9</sub> is selected from the group consisting of hydrogen, optionally substituted alkyl, and an alkali metal; and

X is one of S, NH, or CH<sub>2</sub> when Y is other than R<sub>7</sub>; or

X is one of O, S, NH, CH<sub>2</sub> or absent when Y is R<sub>7</sub>.

7 \ 70. (Currently Amended) The compound of claim 2 having the Formula II:

or a pharmaceutically acceptable salt[[, prodrug]] or solvate thereof, wherein:

 $A_1$  is N and  $A_2$  and  $A_3$  are  $CR_2$ ;

 $R_1$  is selected from the group consisting an optionally substituted alkyl, amino, alkylthio,  $C(O)R_8$ ,  $SO_2R_8$ ,  $OC(O)NH_2$ , 2-imidazolinyl, 2-imidazolyl, 3-pyrazolyl, 5-isoxazolyl, and 3-(1,2,4)-triazolyl;

each  $R_2$  is selected from the group consisting of hydrogen, optionally substituted alkyl, alkenyl, or alkynyl, halogen, hydroxy, cycloalkyl, cyano, amino, alkylamino, dialkylamino, alkoxy, aminocarbonyl, alkylaminocarbonyl, arylaminocarbonyl, aralkylaminocarbonyl, alkylcarbonylamino, arylcarbonylamino, and aralkylcarbonylamino; or  $R_1$  and  $R_2$  are taken together with the carbon atoms to which they are attached to form a heterocyclic ring;



R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, and R<sub>6</sub> are independently selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, halogen, haloalkyl, hydroxyalkyl, hydroxy, nitro, amino, cyano, amide, carboxyalkyl, alkoxyalkyl, ureido, acylamino, thiol, acyloxy, azido, alkoxy, carboxy, earbonylamido and alkylthiol; and

R<sub>8</sub> is selected from the group consisting of alkyl, alkenyl, alkynyl, OR<sub>9</sub>, amino, alkylamino, dialkylamino, dialkylamino, dialkylaminoalkenylamino, dialkylaminoalkenylamino, hydroxyaminoalkenylamino, cycloalkyl, heterocycloalkyl, cycloalkylalkylamino, heterocycloalkylamino, aryl, arylalkyl, arylalkenyl, arylalkynyl, and arylalkylamino, all of which can be optionally substituted, provided that R<sub>8</sub> is not OR<sub>9</sub> when R<sub>1</sub> is SO<sub>2</sub>R<sub>8</sub>; wherein

R<sub>9</sub> is selected from the group consisting of optionally substituted alkyl and an alkali metal; and

X is one of O, S, NH, or CH<sub>2</sub>;

with the proviso that  $R_2$  is not methoxy if  $R_5$  is trifluoromethyl,  $R_6$  is H, X is O and  $R_1$  is  $SO_2CH_2Ph$ .

71. (Currently Amended) The compound of claim 2 having the Formula II:

$$\begin{array}{c|c}
 & R_5 \\
 & R_6
\end{array}$$

or a pharmaceutically acceptable salt[[, prodrug]] or solvate thereof, wherein:

A<sub>3</sub> is N and A<sub>1</sub> and A<sub>2</sub> are CR<sub>2</sub>;

 $R_1$  is selected from the group consisting an optionally substituted alkyl, amino, alkylthio,  $C(O)R_8$ ,  $SO_2R_8$ ,  $OC(O)NH_2$ , 2-imidazolinyl, 2-imidazolyl, 3-pyrazolyl, 5-isoxazolyl, and 3-(1,2,4)-triazolyl;

each R<sub>2</sub> is selected from the group consisting of hydrogen, optionally substituted alkyl, alkenyl, or alkynyl, halogen, hydroxy, cycloalkyl, cyano, amino, alkylamino, dialkylamino, alkoxy, aminocarbonyl, alkylaminocarbonyl, arylaminocarbonyl, aralkylaminocarbonyl, alkylcarbonylamino, and





aralkylcarbonylamino; or  $R_1$  and  $R_2$  are taken together with the carbon atoms to which they are attached to form a heterocyclic ring;

R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, and R<sub>6</sub> are independently selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, halogen, haloalkyl, hydroxyalkyl, hydroxy, nitro, amino, cyano, amide, carboxyalkyl, alkoxyalkyl, ureido, acylamino, thiol, acyloxy, azido, alkoxy, carboxy, earbonylamido and alkylthiol; and

R<sub>8</sub> is selected from the group consisting of alkyl, alkenyl, alkynyl, OR<sub>9</sub>, amino, alkylamino, dialkylamino, dialkylamino, dialkylaminoalkenylamino, dialkylaminoalkenylamino, hydroxyaminoalkenylamino, cycloalkyl, heterocycloalkyl, cycloalkylalkylamino, heterocycloalkylamino, aryl, arylalkyl, arylalkenyl, arylalkynyl, and arylalkylamino, all of which can be optionally substituted, provided that R<sub>8</sub> is not OR<sub>9</sub> when R<sub>1</sub> is SO<sub>2</sub>R<sub>8</sub>; wherein

R<sub>9</sub> is selected from the group consisting of hydrogen, optionally substituted alkyl, and an alkali metal; and

X is one of O, S, NH, or CH<sub>2</sub>;

with the proviso that  $R_2$  is not methoxy if  $R_5$  is trifluoromethyl,  $R_6$  is H, X is O and  $R_1$  is  $SO_2CH_2Ph$ .

(New) A pharmaceutical composition, comprising the compound of claim and a pharmaceutically acceptable carrier or diluent.



